Entrepreneurial Competencies impacting select Micro & Small Enterprise (MSE) performance in Faridabad – Examining the moderating effect of Information Technology

SHORT SYNOPSIS

Submitted in partial fulfillment of the requirement of the degree of

DOCTOR OF PHILOSOPHY

to

Manav Rachna University

by

Srilekh S
MRUMCDN012K160405

Under the supervision of

Dr. POOJA KAPOOR
Associate Professor

Department of Management and Commerce
School of Management and Commerce

MANAV RACHNA
Vidyanatanikshai

MANAV RACHNA UNIVERSITY
Declared as State Private University vide Haryana Act 26 of 2014

Year 2021

1

Scanned by Easy Scanner

MANAV RACHNA
Interdisciplinary Institute

MANAV RACHNA UNIVERSITY
Declared as State Private University vide Haryana Act 26 of 2014

Date: July 30 2021

CERTIFICATE BY SUPERVISOR(S)

This is to certify that, the short synopsis entitled **Entrepreneurial Competencies impacting select Micro & Small Enterprise (MSE) performance in Faridabad – Examining the moderating effect of Information Technology** is an original piece of work done by research scholar **Srilekh.S** under the supervision of **Dr. Pooja Kapoor** for the degree of Doctor of Philosophy in the Department of **Management and Commerce** under the School of **Management and Commerce** of Manav Rachna University, Faridabad during the academic year **2021.**

Further, it is certified that the short synopsis is within the plagiarism limit and copy of the same is attached as per the University norms.

Dr. Pooja Kapoor,
Associate Professor,
Department of Management and Commerce,
Manav Rachna University

Scanned by Easy Scanner

MANAV RACHNA UNIVERSITY
Declared as State Private University vide Haryana Act 26 of 2014

Date: July 30 2021

DECLARATION BY THE SCHOLAR

I hereby declare that the short synopsis entitled **Entrepreneurial Competencies impacting select Micro & Small Enterprise (MSE) performance in Faridabad – Examining the moderating effect of Information Technology** being submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy in the **Department of Management and Commerce** under the School of **Management and Commerce** of Manav Rachna University, Faridabad during the academic year **2021.**

It is the work that is expected to be carried out under the supervision of **Dr. Pooja Kapoor.** Further, it is declared that the short synopsis is within the plagiarism limit and copy of the same is attached as per the University norms.

Srilekh S
MRUMCDN012K160405

Scanned by Easy Scanner

ABSTRACT

The global industrial scenario has changed over the years, but what remains relevant and important is employment generation and contribution to the country's economy. Every day the challenges that are thrown towards the entrepreneurs is different and their performance depends on how fast they adapt to such changes. Information technology has already changed the way industries work.

Considering the above statement, **MSMEs** are called as back bone of Indian economy. But the nature of work or challenges they face is different. Some of the issues they face is the constant comparison with MNCs, challenges in adoption of technology. Our research here has the main objectives of understanding these very challenges.

To keep the topic focused, Engineering units in Faridabad (Micro and Small industries) has been taken up for the study. The thesis revolves around some primary entrepreneurial competencies and how they impact the enterprise performance. The research looks at this from an angle of information technology acts as moderator.

Key Word: MSME**,** Micro and Small Enterprise**,** Entrepreneurial Competencies, Information Technology, Enterprise Performance.

Contents

1. Introduction 3
2. Justification of the problem 6
   2.1 Need for the study 7
   2.2 Contribution of the research 7
3. Review of Literature 8
   3.1 Entrepreneurial Competencies 8
   3.2 Organizational Performance 14
   3.3 Relation between Entrepreneurial Competencies and Organizational Performance 16
   3.4 SWOT analysis of MSEs 18
   3.5 Information Technology adoption by entrepreneurs 20
   3.6 Entrepreneurial Competencies focused in the study 22
4. Objectives of the study 22
5. Hypothesis 23
6. Research Methodology 24
   6.1 Research Design 24
   6.2 Sampling 25
      6.2.1 Sampling Technique 25
      6.2.2 Sample Size 25
   6.3 Data Collection 26
   6.4 Data Analysis 27
7. Bibliography 28

1. Introduction

There is a fundamental shift in global eco-system, with primary focus being on entrepreneurship and innovation. These are the two catalysts which lead to job creation. A decade ago, almost all the industries used to follow a standard set of operating and organization set up model. But with the rapidly changing global needs and technology, even this set up has seen a major paradigm shift.

Clearly, the Indian enterprise ecosystem has set the ground for the following:

a. Massive Job Creation
b. Solving consumer problems through innovation
c. Making a global impact by coming up with products for rest of the world

The last decade has seen a large number of global investors making a beeline for India. They have not just realized the potential but also understand and acknowledge the ease of doing business in India.

These trends have not only impacted big established organizations, but also micro and small enterprises as well. As per MSME report , 2017-18, this sector has emerged and has been expanding exponentially over the past five decades. MSME sector definitely contributes in a significant way towards

-economic and social development of the country

- generating employment

Micro, Small and Medium Enterprises (MSMEs) form a large portion of industrial composition in any developing country. For any nation Micro, Small and Medium Enterprises (MSMEs) are the growth engine.(MSME Report 2017-18)
As per Ministry of MSME,2017 statistics, MSMEs manufacture over 8,000 products, 40% of total exports from India, contribute 8% of Gross Domestic Product (GDP). They generate employment for around 73 million people.

MSMEs in India are mostly in the unorganized sector and a source of sustenance for millions of people. This sector of micro and small industries serves as a platform for entrepreneurs and developing units. Some of these micro and small enterprises move to become large and well established and some fade into oblivion.

Our research here will focus on these micro and small enterprises in Faridabad district of Haryana and try to understand as to how entrepreneurial competencies contributes to the performance of these enterprises.

Definition of MSME

In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) *were* classified as below:

Manufacturing Sector	
Enterprise Category	**Investment in plant & machinery**
Micro Enterprises	Does not exceed twenty-five lakh rupees
Small Enterprises	More than twenty-five lakh rupees but does not exceed five crore rupees
Medium Enterprises	More than five crore rupees but does not exceed ten crores Rupees
Service Sector	
Enterprise Category	**Investment in plant & machinery**
Micro Enterprises	Does not exceed ten lakh rupees
Small Enterprises	More than ten lakh rupees but does not exceed two crore rupees
Medium Enterprises	More than two crore rupees but does not exceed five core rupees

But this definition has been changed now and the new definition came into effect from 1-July-2020

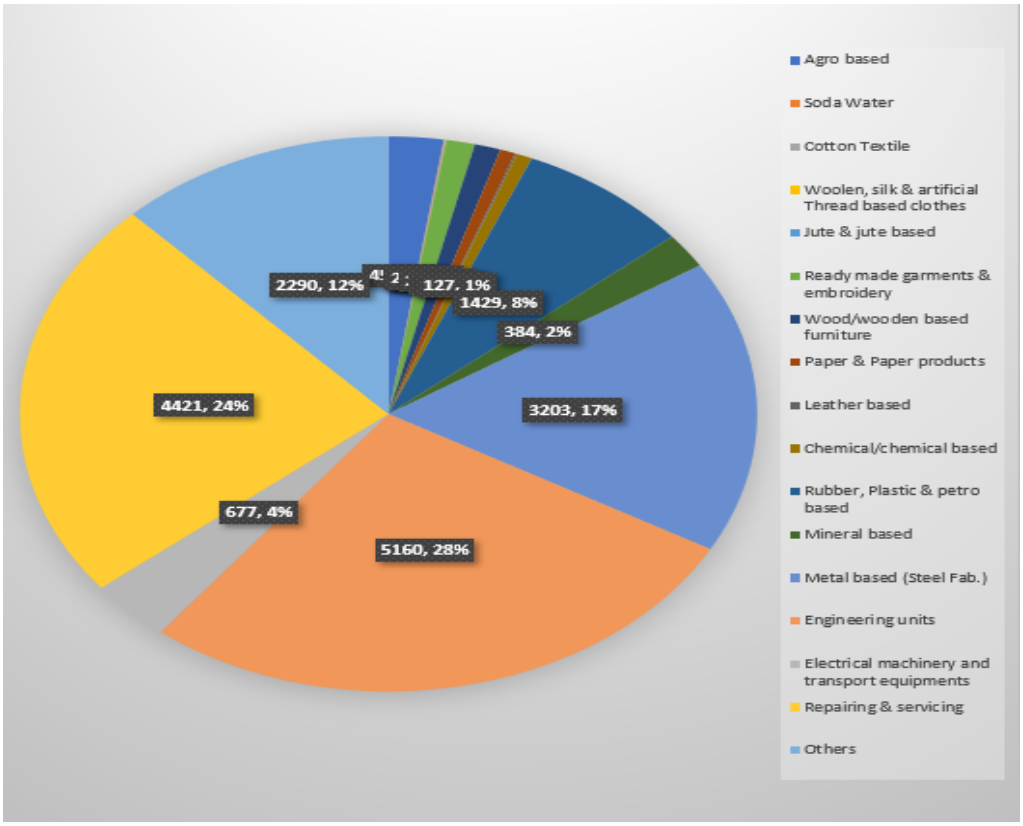
Revised Classification applicable w.e.f 1st July 2020			
Composite Criteria: Investment in Plant & Machinery/equipment and Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing Enterprises and Enterprises rendering Services	Investment in Plant and Machinery or Equipment: Not more than Rs.1 crore and Annual Turnover ; not more than Rs. 5 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.10 crore and Annual Turnover ; not more than Rs. 50 crore	Investment in Plant and Machinery or Equipment: Not more than Rs.50 crore and Annual Turnover ; not more than Rs. 250 crore

One of the leading industrial areas is Faridabad, Haryana. It has been a popular choice for setting up industry due to its proximity to Delhi. In the recent rimes Faridabad has been facing competition from Noida and Gurgaon in terms of investment in IT sector. But it still has a strong foothold when it comes to manufacturing.

As per the MSME report 2016-17, below is the complete list of existing micro and small enterprises

Type of Industry	**No. of units**	**% contribution**
Agro based	450	2.40
Soda Water	5	0.03
Cotton Textile	12	0.06
Woolen, silk & artificial Thread based clothes	3	0.02
Jute & jute based	2	0.01
Ready-made garments & embroidery	235	1.25
Wood/wooden based furniture	214	1.14
Paper & Paper products	127	0.68
Leather based	17	0.09
Chemical/chemical based	127	0.68
Rubber, Plastic & petro based	1429	**7.62**
Mineral based	384	2.05
Metal based (Steel Fab.)	3203	**17.08**
Engineering units	5160	**27.51**
Electrical machinery and transport equipments	677	**3.61**
Repairing & servicing	4421	**23.57**
Others	2290	12.21
TOTAL	**18756**	

Fig 1. MSE divide in Faridabad



But even among these, some are successful and some not so successful.

This leads to some interesting question of what the major reason for the enterprise performance could be.

- What are the major and minor issues faced by MSEs ?
- What are the probable solutions to address these issues?
- How is the entrepreneur responsible for the success or the failure of an enterprise?
- How does information technology adoption impact enterprise performance?

2. Justification of the problem

a. A lot of focus is being given on studying the competencies and organizational performance independently. Some studies have also been identified which discuss about top management's competencies and its impact on the performance of the org. But there were just a handful of them that have been conducted in Indian context. In our research we will focus on micro and small enterprises in Faridabad.

b. There is still a lot of scope for research with regards to enterprises and this study would help in analyzing the reasons and relation between entrepreneurial competencies and the enterprise success or failure.

The research will focus on –

1. Micro and Small Enterprises which have been existing for min 3 years
2. Micro and Small enterprises which adhere to the standard definition in MSME
3. Micro and Small enterprises in Faridabad district of Haryana

With the ever-changing business scenario and with the technology moving towards automation, AI, the entrepreneur is expected to future-ready. MSEs operate all together on a different scale and have a unique set of challenges.

This research will dwell deep into the factor of how vital is entrepreneurial competency for organizational performance in today's highly competitive business environment and what moderating role does Information Technology (IT) adoption play in the same.

2.1 Need for the study

Research on this topic is needed due to below reasons:

1. The MSME sector contributes to almost 29% of our country's GDP. This is expected to grow to 50% by 2025. To achieve this target, it is essential to understand the forces behind enterprise success.
2. Literature review related to SWOT of MSEs revealed the issues these organizations face. One of the major issues they face is non usage of technology or using obsolete technology.
3. This study is a must for all the existing and upcoming Micro and Small enterprises and entrepreneurs as they are the ones who create employment.
4. The study will help in analyzing the reasons behind success and failure of Micro and Small enterprise. This will help the entrepreneurs to learn and act accordingly.
5. There definitely cannot be one common solution or suggestion, so our study would help entrepreneurs in understanding the existing issues.

2.2 Contribution of the research

Following are the anticipated contribution this research will make:

1. This would act as a guide for entrepreneurs to understand what underlying characters/competencies are needed to run an enterprise.
2. This would act as a guide for the organizations.

3. This research would act as base for many new researches so that they can take up the gaps and do further enhancements.
4. This research would also help existing SMEs in understanding the factors behind a successful enterprise.

3. Review of Literature

Every organization is definitely set up with a vision and mission and one of the prime motives behind the setup is to solve/simplify an identified problem by providing solutions in the form of a product or a service. In this study we have the following major factors:

- ➔ Entrepreneurial competency (EC)
- ➔ Enterprise Performance (EP)
- ➔ MSEs
- ➔ IT adoption in MSEs

Apart from the above factors literature was reviewed for the below as well

- ➔ EC impacting EP
- ➔ SWOT analysis of MSEs
- ➔ Influence of IT adoption on MSE performance

This section of the synopsis is the most important one as it is these research papers/journals/articles which help us in building an understanding of the underlying concept and encourage us to ask the right questions.

3.1 Entrepreneurial Competencies

Van Aardt (2008) has defined entrepreneurship as the act of initiating, creating, building and expanding an organization. Also included is the responsibility of building a team and identifying opportunity in the market place for long term growth.

So essentially anyone who shows keen interest towards setting a new business venture and working towards its expansion is an entrepreneur. In the next part, we quickly look at the various factors which influence a business setup.

For an organization to function, there are a number of internal and external factors which influence the same. As highlighted by Spetch (1993), there are five main external factors affecting an organization formation:

a. Social
b. Economic
c. Political
d. Infrastructure Development
e. Market Factors

An entrepreneur is the one who can identify the right opportunity and work towards balancing both internal and external factors.

On the same lines related to the factors influencing setting up of an organization, Gartner (1985) came up with a conceptual framework. Where he said that a new venture creation is an interaction between

a. The environment
b. The individual
c. The organization
d. Entrepreneurial behavior

The above-mentioned research papers establish a base that for an organization to not only be setup but also to sustain, a number of factors come into play. An entrepreneur needs to understand these forces and act accordingly. Further down, we start looking at various definitions given by researches on what entrepreneurial competencies could mean and how it acts as a tool for an organization's performance.

Man, Lau &Chan (2002) defined six types entrepreneurial traits: opportunity, relationship, conceptual, organizing, strategic and commitment.

As per Kiggundu (2002), entrepreneurial competencies offer a realistic view of running a business.

As per Timmons (1994), entrepreneurship is the process of creating or seizing an opportunity and pursuing it.

One more interesting definition from Timmons and Spinelli (2010) stated entrepreneurship as a way of thinking, reasoning and acting. They state that 'actions are opportunity obsessed, holistic in nature and leadership balanced.'

Bird (1995) has defined entrepreneurial competency as underlying characteristics which result in a venture's birth, survival and growth. He has listed some of the characteristics as:

- Generic Knowledge
- Specific Knowledge
- Traits
- Motives
- Social Roles
- Self-image
- Skills

Boyatzis, 1982; Brophy & Kiely, 2002 have defined entrepreneurial competencies as individual characteristics, which are enablers to achieve and maintain business success- it includes both attitude and behavior. They also wrote that the entrepreneur's motives, traits, self-image, attitudes, behaviors, skills, and knowledge are a part of their competency.

As per Morris & Lewis (1995), entrepreneurship is a phenomenon which is driven by environment. They argue that entrepreneurship can be applied at various levels – social level, organization level, individual level. Interestingly they had categorized environmental determinants into three groups: Infrastructure – Turbulence -Personal Life Experience

Kumar & Misra (2000) studied the 'entrepreneurial resourcefulness' model and helped in understanding the aspects prompting an entrepreneur in identifying opportunities and make the best use of the same. The model elaborates three entrepreneurial competencies

a. Cognitive
b. Effective
c. Action oriented

In some studies, done by multiple authors Covin&Slevin (1991); Lumpkin & Dess (1996); Morris &Kuratko (2002), three key dimensions have been identified as stimulators for entrepreneurial actions:

a. Innovativeness – Seeking of creative solutions.
b. Risk-taking – Ability and willingness to seek new opportunities with a reasonable chance to failure.
c. Proactiveness – Ability to act to convert an opportunity.

Interestingly in a study on 'entrepreneurial leadership' done by Hornsby &Kuratso (1999), high focus was given on implementing entrepreneurial leadership in organizations. This topic turned out to be the most important aspect for 21st Century. This further set the stage for a lot of research on interaction between individuals and organization.

As per Sundaram (2003), in the research paper "The impact of antecedents on entrepreneurial propensity and entrepreneurial competency of final year engineering students of Chennai city", below are the list of competencies and entrepreneur should possess.

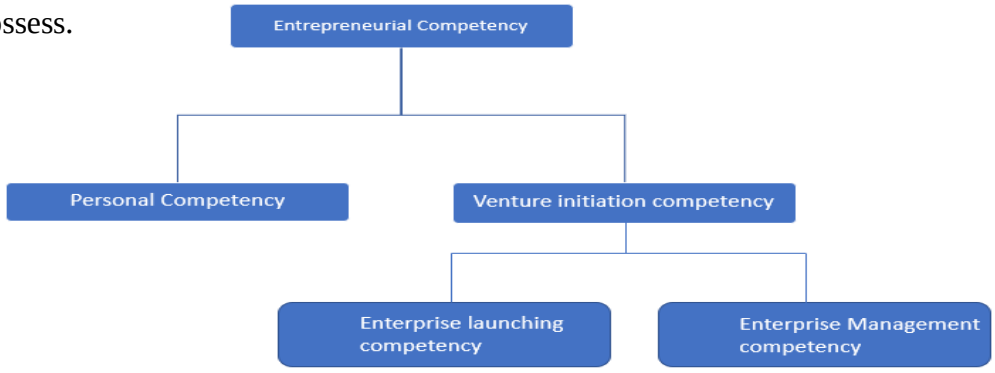


Fig 2. Entrepreneurial competencies as per Sundaram(2003)

Personal Entrepreneurial Competency and its meaning	
1. Initiative	An entrepreneur should go beyond his normal duties and take initiatives towards extending a business or coming up with an innovative solution. This character will help him/her to stay ahead in the business.
2. Opportunity grabbing	An entrepreneur always looks for and takes action on opportunities. He Sees and acts on new business opportunities and Seizes unusual opportunities to obtain financing, equipment, land, work space or assistance.
3. Persistence	An entrepreneur is able to make repeated efforts or to take different actions to overcome an obstacle that get in the way of reaching goals.
4. Information seeking	An entrepreneur is able to take action on how to seek information to help achieve business objectives or clarify business problems. Has the ability to ask the right question.
5. High Quality of Work	An entrepreneur acts to do things that meet certain standards of excellence that gives him greater satisfaction.
6. Committed	An entrepreneur places the highest priority on getting a job completed. They make a personal sacrifice or take extraordinary effort to complete a job and accept full responsibility.
7. Efficiency Orientation	A successful entrepreneur always finds ways to do things faster or with fewer resources or at a lower cost. They look for or finds ways to do things faster or at less cost
8. Systematic Planning	An entrepreneur develops and uses logical, step-by-step plans to reach goals. They plan by breaking a large task into subtask and develop plans.
9. Problem solving	Entrepreneurs identify new and potentially unique ideas to achieve his goals.

10. Self-Confidence	Entrepreneur with this competency will have a strong belief in self and own abilities. They express confidence in their own ability to complete a task or meet a challenge.
11. Assertive	An entrepreneur confronts problems and issues with others directly. Entrepreneur with this competency vindicate the claim to asset their own rights on others.
12. Persuasion	Entrepreneurs with this competency successfully pursue others to perform the activities effectively and efficiently. An entrepreneur can persuade or influence others for mobilizing resources, obtaining inputs, organizing productions and selling his products or services.
13. Influential	An entrepreneur is able to make use of influential people to reach his business goals. Entrepreneurs with this competency influence the environment (Individuals/Institution) for mobilizing resources organizing production and selling goods and services to develop business contacts.
14. Concern for Employee Welfare	Entrepreneurs with this competency take action to improve the welfare of employees and take positive action in response of employee's personal concerns.

Venture Initiation Competencies	
1. Understand the Business nature	Ability to analyze the business ecosystem and work towards maximizing the opportunities and minimize the risk
2. Ability to identify potential entrepreneur	Ability to evaluate an individual based on both qualification and other potentials like decision making, solving a problem with creative and out of the box insights
3. Develop a Business Plan	Ability to plan and propose business.
4. Define Ownership	Ability to manage an organization and set up rules/protocols and clearly define the ownership.
5. Plan market strategy	Ability to understand the nitt-gritty of the global market and strategies accordingly.
6. Understand the logistics	Setting up of a business requires the manager to understand the logistics and act accordingly
7. Understand the financial plan	Ability to read through financial statements and make plan and judgement accordingly
8. Understand the legalities	Ability to appraise the effects of various regulations on the business operations
9. Understand the government regulations	Ability to develop policies for the business to comply with the Government rules and regulations.
10. Business Management	Ability to plan, manage and control the business
11. Manage Human Resources	Ability to establish a connect with the human resources of the company. This is important not just to have a high employee satisfaction, but also to establish a common organization goal.
12. Business Promotion	Ability to create a long-term promotional plan and come up with strategy to advertise or promote the org based on the competitive situation.
13. Understanding of sales	Ability to develop a sales plan for the business and keep the sales team abreast with the company goals.
14. Financial Management	Ability to understand cashflow pattern and plan financial control procedure.
15. Customer Management	Ability to connect with the customers and give them the right view of the organization's operation model.
16. Business Projection	Ability to take the organization/company to the highest level by projecting in the right manner and right direction.

One more study by Kochadai (2001), has identified twenty-five areas of entrepreneurial competencies which is further categorized into three sections.

Attitudinal Competencies	Behavioral Competencies	Leadership/Managerial Competencies
Self Confidence	Initiative	Information seeking
Self Esteem	Acting on opportunity	Systematic planning
Dealing with failure	Persistence	Problem solving
Tolerance for ambiguity	Assertiveness	Persuasion
Performance	Need for achievement	Goal setting & perseverance
Concern for high quality	Need for autonomy	Communication skills
Locus of Control	Risk taking	Technical knowledge
	Drive and energy	Social skill
	Innovation	
	Creativity	

Based on the other research papers one more category can be added here enterprise competency, which is essential for running an enterprise. Competencies listed by Sundaram (2003) can be added to this category.

Enterprise Enforcement Competencies
Understand business nature
Define ownership
Develop business plan
Plan market strategy
Business management
Business promotion
Financial management
Customer management
Business projection

Fig3. Four Dimensions of Entrepreneurial Competencies based on the existing research- ABLE Model

3.2 Organizational Performance

Talking of Organization performance, in a study by Ismail, 2012, business performance has been indicated by growth in sales, profit and customers.

Hammer & Champy (1994) have stated that a business process is a set of activities performed to attain a common goal which is aligned with a common objective. To measure and indicate if these common goals have been attained, Edward and Thomas (2005) have discussed of KPIs which are compiled to assess the performance.

Referring to the research done by Alchain & Demsetz (1972); Jensen & Meckling (1976); Barney (2001), organization performance has been defined as voluntary association of productive assets – inclusive of human, physical and capital resources – for the purpose of achieving a common goal.

This essentially gets interpreted as the forces that come together a create a value.

In a study done by Brush &VanderWerf (1992), they had studied and found that thirty-five different measures for performance could be used. But the most frequently used measures were:

- Changes in Sales
- Organizational Survival
- Employee count
- Profitability

In essence, an organization's performance can be divided into the below four metrics:

a. Financial Metrics
b. Customer Metrics
c. Process Metrics
d. People Metrics

In one more research by Parmenterg (2007), he gave a very interesting aspect that Key Performance Indicators (KPIs) should have some characteristics like being nonfinancial, should be frequently measured, should be acted upon by the CEO (refer to top management), should be understood by the teams.

According to Venkatraman & Ramanujam, 1986, performance can be measured using both financial and non-financial factors.

Kirchhoff (1977), argues for the need a better and complex measure for organization effectiveness as single variables are in adequate in real world, where the organizations are required to satisfy multiple stakeholders and also have multi-goal existence.

Zou and Stan (1998) proposed a composite scale using seven categories of financial and non-financial measures.

Financial measures (objective)– sales measure, profit measures and growth measures.

Non-financial measures(subjective) – perceived success, satisfaction and goal achievement.

Venkatraman & Ramanujan (1986) suggest that researchers should consider a combination of financial indicators and operational indicators like product quality, value added, marketing efficiency while measuring organizational performance.

A diagrammatic representation of the multi-indicator approach for enterprise success.

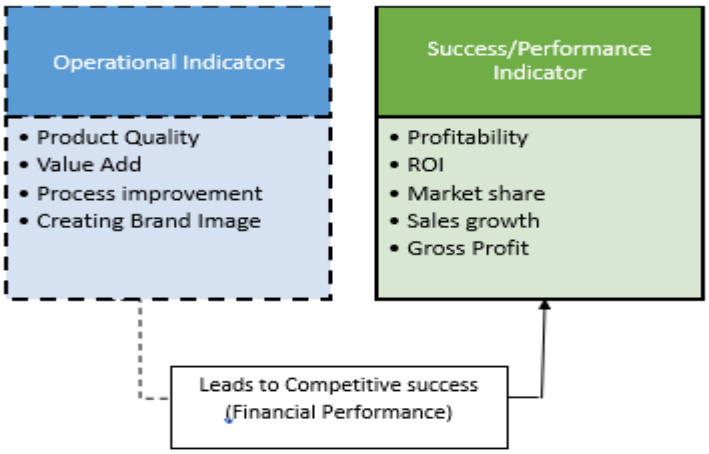


Fig5. Multi-indicator approach for measuring enterprise performance/success

These operational indicators might eventually lead to financial performance.

3.3 Relation between Entrepreneurial Competencies and Organizational Performance

In this section, we will see the various research which have been done to establish the relation between entrepreneurial competencies and organization's performance.

Koning and Brown (2001) did a research, which established that opportunity alertness is an outcome of entrepreneurial orientation.

Ibrahim, Kabir, Shah (2017) conducted a study in Nigeria, which proved a direct link between the competencies held by female entrepreneurs and their business performance.

Dubey, Manshani (2017) conducted a study of women entrepreneurs in India, where they identified innovative thinking, risk taking ability and technology knowledge as primary ability to set a start-up.

In another study conducted by Man et al. (2008), Ahmad, et al. 2010 and Ahmad (2007), the results stated that there is a positive relation between firm's performance and strategy, opportunity and organizing competencies.

According to Kiggudu (2002), entrepreneurial competencies offers a realistic view of the how a business is run.

As per Mansfield, McClland, Spencer, and Santiago (1987) their research concluded that entrepreneurial competencies help in the prediction and give an insight into business formation and success within and across culture.

Glueck (1980) identified that lack of abilities to perform managerial functions led to more than 90 % of entrepreneurial failure.

In one more research done by Madata (2011) done on SMEs in Tanzania, there was clear evidence that managerial decisions influence the success of the business (for

example, adaptability related, planning related , ability of identify and seize opportunities).

As per Mussak (2003), to reach an established goal, an entrepreneur needs the capability to solve a problem, which is what as per him can be termed as competency. According to the author 'competency is directly proportional to the obtained results, but inversely proportional to the consumed time to reach it and to the volume of resources'.

One more interesting research done by Dotlich and Cairo (2003), Finkelstein (2007), Singh

Corner and Pavlovich (2007), focused on business failure. As part of this research it was identified that business failure is connected with manager's decision and behavior. This is linked with the entrepreneurial feature influencing behavior.

Misra, Srivastava (2018) did a research on the transformational leadership, where the parameters considered were (a) personal effectiveness (b) team building competency (c) job satisfaction. As per the result, it is the top management's responsibility to make sure that all the employees work as team to deliver quality output. They also suggest that the top management should adopt a transformational managerial ability along with working with the teams in building their competency. A leader at the top management would not be able to work towards such a work environment, without actually knowing the ground reality. So, one more important aspect of the top management is to be able to manage the Human Resources and be able to connect with them.

As per a research done on business performance by Dept of Business Innovation & Skills (March 2015), in UK, it has been identified that deficiencies in leadership and management skills are key constraints.

A further dig into more research papers gave us more views of what the top management's competencies should be. Eight critical factors for success as per the research done by Jha& Tripathi (2018),

- Top management's competency
- Experience and performance
- Project factor
- Supply chain and leadership
- Favorable market
- Marketing team

- Availability of staff

In a study done by Arora, Sharma and Vashisht on Impact of managerial ability and firm specific variables, they have identified that a high ability manager, who is more knowledgeable about the economic system would be able to predict the future performance of an enterprise.

3.4 SWOT analysis of MSEs

This section explores the various research papers related to SWOT analysis of MSEs. The aim is to understand if MSEs have information technology related issues.

Kakde, B. B., & Chaudhari, T. (2018) aimed to study the type of problems faced by MSEs and scope of development in the area.

Self-designed questionnaire was used and analysis was done based on that. In the study done in Bhandara district of Maharashtra, 4 major problems have been identified

1. Finances
2. Labor
3. Marketing
4. Technical

Conclusion:

The study identified that finance related issues were the most impacting one apart from labour, marketing and technical. It suggested that Government schemes need a relook and more support should be given to the MSEs with regards to financial, technical and infrastructural support.

The limitation is that the study is restricted to Bhandara area and each aspect needs to be further dug.

Take back : Technical/technology based issues do impact MSEs and need to be explored further. Marketing with technology support could also be a factor to be looked into.

In another research by Hedge, M. V., & Sabarirajan, K. K. (2018), SWOT analysis of MSEs was studied.

A study was conducted in Peenya, Bangalore. This was related to the SWOT of MSEs and 163 MSEs were identified and questionnaires were administered. Based on the SWOT analysis solutions were suggested to reform the strategies in order to control threats. Some of the weakness identified were – lack of trained workers and lack of technical superiority. Threats identified – Financial stringency and technological obsolesce.

Conclusion – Trainings need to be provided to eliminate the gaps and MSEs need to be educated about various Govt policies with which they can benefit.

Limitations – The study is limited to Peenya region and does not explore all the factors. Also, it doesn't look and suggest on how technological obsolesce impacts the enterprise growth. Further studies could be done on these lines.

In a research by Sinarwati, N. K., & Setiawina, N. D. (2020), MSEs performance increasing based on SWOT analysis was studied. Some of the weaknesses identified were less innovation and limited market knowledge. Suggestions for trainings and support for online marketing has been given.

Gaps and Further analysis – The study does not reveal on how innovation impacts the enterprise performance. Also a general solution has been given, where as not every MSME can have the same solution. Deeper analysis needs to be done on this line.

Singh, Pachpande (2016), studied the Marketing problems of SMEs in the field of manufacturing industries in Pune. Their objective was to study marketing problems faced by SMEs and to find how SMEs use latest digital marketing techniques.

Many suggestions were made. Among them, the ones relevant for our further study is that SMEs should go on e-platform and that digital marketing is a must. This research makes it very much evident that technology plays an important part in enterprise performance.

One more interesting research paper is by Das(2017), SWOT analysis of MSME in rural society in Ganjam district of Odisha. This study like many others also was conducted with the objective of identifying SWOT of MSEs. Important observations where technology support can be utilized

- Establishing customer base
- Marketing
- Knowing the potential market
- Establishing quality
- Efficient use of internet to seek knowledge on latest provisions by the Govt
- To observe and convert trends into opportunities

Conclusion of the scholar based on the SWOT of MSME related review papers

From the above discussed research papers it is evident that information technology plays a very important part in not just keeping the enterprise updated, but also in keeping them abreast with their competitors. All the MSEs cannot have 'one-fits-all' kind of technological upgrade. So, a study needs to be done on identifying the need and the best fit technology.

Also, to run an enterprise successfully technology is not the only criteria. An entrepreneur needs to work on his competencies as well. So the next step was to look at research papers discussing IT adoption by entrepreneurs.

3.5 Information Technology adoption by entrepreneurs

This section looks at various research done on IT adoption by entrepreneurs.

Manocha, S. (2012) studied innovation and entrepreneurship. Interesting observation was that innovation impacts the economy at 3 levels

Innovative Entrepreneurship percolates to

- Aggregate level
- Consumer level
- Firm level

All three percolate through the economy.

Aggregate Level –> Creates new jobs – increases income -potential for investment

Consumer level-> added value to the customer

Firm level – org/company can out compete other companies

Aruna, H. A. M. (2013)., studied the technology innovation for SME growth. The objective to measure the impact of tech innovation adoption behavior on org performance. It was identified that there is a positive relation between % of innovated product in total sales and ratio of growth of sales of innovative SMEs

Conclusion : SME innovation leads to enhancement of competitiveness in the form of quality imp,cost reduction,extension in prod range.Innovative smes ---reported higher growth in terms of sales turn over, employment, investment.

Based on the study of successful entrepreneurial traits by Singh, Rahman (2012), 14 attributes were taken.

Conclusion: Using Factor analysis, factors were reduced to the below

- Innovative
- Futuristic mindset
- Risk taking
- Adaptability
- Commitment

As per Srivasta, Surjan (2013), in a study conducted on micro and small industries across India, majority of them had very low engagement and awareness of technologies. Three business types emerged

a. Tech novice
b. Tech aspirers
c. Moderate tech adopters

As per their study, following characters and issues have come out

1. Inconsistent level of professionalism
2. Very less or no R&D
3. Lack of latest management practices
4. Poor access to trained workforce, tech information and support

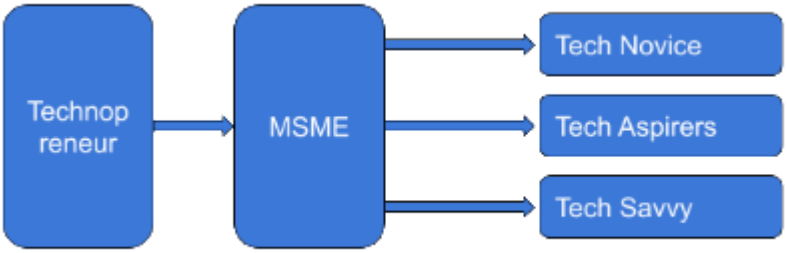


Fig 6. MSMEs categorized based on Technology exposure

In a research by Premkumar G and Roberts M(1999), it was determined that usage of information technology opened up many new opportunities for small businesses.

Conclusion of the scholar based on the Technology adoption in MSME related review papers

MSMEs challenges range from the very basic internet usage to the more complicate quality maintenance.

Based on the above research papers, it is clear that efficient technology adoption could ease out many of the regular and repetitive issues being faced by the enterprises. Our research will dwell into how technology adoption acts as a moderator between EC and EP, , in terms of MSEs in Faridabad district.

3.6 Entrepreneurial Competencies focused in the study

Based on the literature review done, it is quite evident that an entrepreneur has a number of competencies. Studying every competency in this research would be beyond possibility and hence the below mentioned competencies based on review and webinars has been identified

a. Act on opportunity
b. Innovative
c. Market plan
d. Customer Focus
e. Social Skill
f. Information Seeking

These competencies will be studied in detail. Objective for the study have been listed in the next section.

4. Objectives of the study

The aim of the research is to develop a entrepreneurial competency model that incorporates a multisectoral application based on the empirical data. Primary objectives being:

1. To study the nature and dynamics of MSEs in Faridabad district
2. To develop a causal modal to identify the most important entrepreneurial competencies impacting enterprise performance
3. To evaluate the primary factors influencing the adoption of Information technology (IT) in MSEs

4. To examine the contribution of Information Technology (IT) on MSE performance.
5. To empirically evaluate and test the moderating effect of technology on the relation between EC and MSE Performance

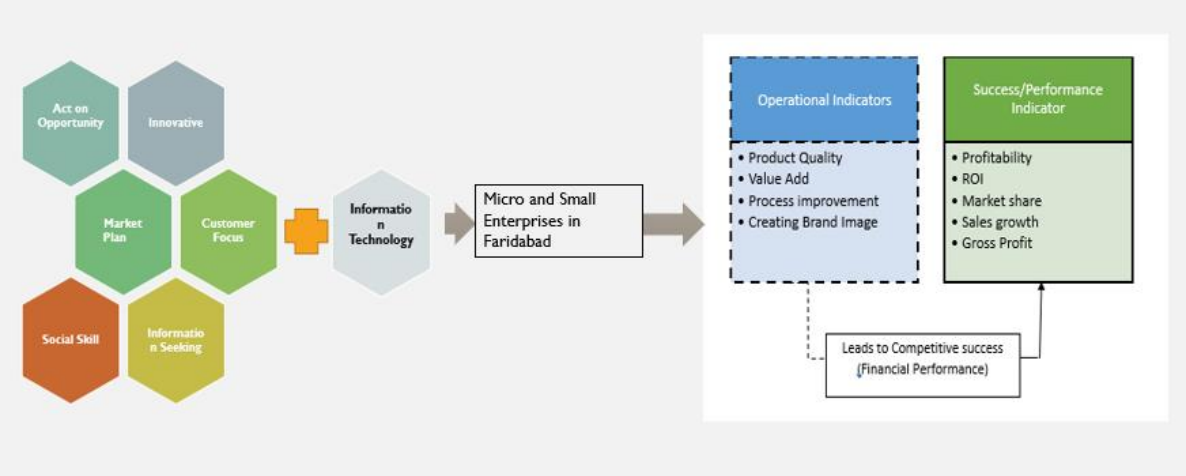


Fig 7. Framework to evaluate and test the moderating effect of technology on the relation between EC and MSE Performance

5. Hypothesis

In order to thoroughly investigate the objectives, and also with support of the literature review done, below hypotheses are formed:

Hypothesis for acting on opportunity competency

H0: There is a significant relation between IT supported acting on opportunity and MSE performance.

H1 : There is no significant relation between IT supported acting on opportunity competency and MSE performance.'

Hypothesis for innovative competency

H0 : There is a significant relation between IT supported Innovative competency and MSE performance.

H1 : There is no significant relation between IT supported Innovative competency and MSE performance.

Hypothesis for marketing plan development competency

H0 : There is a significant relation between IT supported marketing plan competency and MSE performance.'

H1 : There is no significant relation between IT supported marketing plan competency and MSE performance.'

Hypothesis for customer focus competency

H0 : There is a significant relation between IT supported customer focus competency and MSE performance.'

H1 : There is no significant relation between IT supported customer focus competency and MSE performance.'

Hypothesis for social skill competency

H0 : There is a significant relation between IT supported social skill and MSE performance.'

H1 : There is no significant relation between IT supported social skill competency and MSE performance.'

Hypothesis for information seeking competency

H0 : There is a significant relation between IT supported information seeking and MSE performance.'

H1 : There is no significant relation between IT supported information seeking competency and MSE performance

6. Research Methodology

This research aims at analyzing the Micro and Small Enterprises in Faridabad district. As part of the research entrepreneurial competencies contributing to the success of enterprises will be studied. It will further dwell into the technology utilization by these enterprises and how it has benefitted them. The research will use a combination of primary and secondary data. Since the owners and middle level managers in Micro and Small enterprises in Faridabad region will be more comfortable with the regional language, primary data will be collected via interviews. These interviews will then be mapped and updated to a structured questionnaire. Secondary data will be collected from various literary sources.

6.1 Research Design

1. Exploratory Design

   The study will be exploratory in nature where the entrepreneurs and micro and small enterprises will be interviewed. Keeping in mind the main objectives, the research will

aim at getting insight into entrepreneurial competencies. Appropriately this study will combine strategies of both primary and secondary methods.

2. Descriptive Design

We would be using Descriptive research to seek answers for who, what, when, where and how. Although the descriptive research would not be able to give conclusions, it definitely helps in understanding the current phenomenon with respect to the variables considered.

6.2 Sampling

6.2.1 Sampling Technique

Convenient Sampling method will be used. For the proposed study top and the middle level managers will be considered. Questionnaires will be shared. These managers will be from micro and small enterprises.

6.2.2 Sample Size

The sample size would be calculated using statistical methods and the respondents would be of various categories

Respondent categories:

- MSE Owners
- Mid level Managers/ Supervisors

These micro and small enterprises will be a representative of the whole population of the enterprises in Faridabad. And the results applicable to Faridabad will be applicable to elsewhere also with similar industrial environment.

Cochran (1977) developed a formula for sample size calculation:

$$n_0 = \frac{z^2 pq}{e^2}$$

n_0 = Sample Size
z = Critical Value for desired confidence level
p= Estimated proportion of an attribute that is present in the population
q= (1-p)
e=desired level of precision

Assumptions:

p=50 % (0.5) (assuming maximum variability)

q=(1-0.5)=0.5

Taking 95% confidence interval
+- 5% precision

p=0.5, q=0.5, e=0.05, z=1.96

$$n_0 = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384.16 = 384 \ldots\ldots (i)$$

Cochran's formula in case of finite population

As per Faridabad District Industrial Profile (DIP), 2018-19, there are 5160 MSEs

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

n_0 – Value derived from (i)
N – Population Size

n= 384/ (1 +((384-1)/5160)) = 357

Sample Size = 357

6.3Data Collection

The study will be supported by both primary and secondary sources which will be collected from different sources.

Primary data will be collected by conducting interviews with MSE owners and middle level manager/supervisors.

As a part of primary data collection, interviews will be conducted. Three different categories of interviews , based on the situation and the kind of interaction with MSE owner, will be used.

- Standardized (Formal and Structured)
- Unstandardized (non-formal and unstructured)
- Semi Standardized

Secondary Data will be collected from

- Annual reports published on MSEs
- Economic Journals/Industry directory/Business directory

- Annual financial report
- Enterprise report

6.4Data Analysis

The study would rely on the analysis of both quantitative and qualitative data.

Data gathered from the questionnaire will be analyzed using both descriptive and inferential statistics.

1. Descriptive statistics will be used for frequency distribution
2. Chi-square test will be used for inferential statistics.
3. Statistical Package for Social Science (SPSS) will be used to analyze the contribution of independent variables on dependent variables for data analysis.

Summary, Findings and Suggestions will be published based on the above.

7. Bibliography

1. A Timmons, Jeffry & Spinelli, Stephen &Ensign, Prescott. (2010). New Venture Creation.
2. Ahmad, N. H. (2007). A cross cultural study of entrepreneurial competencies and entrepreneurial success in SMEs in Australia and Malaysia. *University of Adelaide, Australia*, (May), 1–323. https://doi.org/10.5539/ass.v8n3p236
3. Anitsal, M. M., & Enterprises, W. (1939). *International Journalof Entrepreneurship*, 18.
4. Arora Shallu, Meena Sharma, AK Vashisht (2017), Impact of managerial ability and firm specific variables on insider's abnormal returns, *Decision- IIM Calcutta*, Volume 44, Number4
5. Arora, D. (2005). Foreign multinationals in India: Adapting to India's work culture and management practices. *Internationale Geschäftstätigkeiten in Asien: …*, 1–37. Retrieved from http://people.f3.htw-berlin.de/Professoren/Arora/discussion_paper/Foreign_Multinationals_in_India-Dayanand_Arora.pdf
6. Aruna, H. A. M. (2013). *Technology Innovation for SME Growth : A Perception for the Emerging Economies*. *4*(3), 156–163.
7. Balunywa, W. (2009). Portfolio Entrepreneurs and Economic Growth : The Case of Uganda. A Thesis Submitted for the Degree of Doctor of Philosophy in University of Stirling.
8. Barazandeh, M., Parvizian, K., Alizadeh, M., & Khosravi, S. (2015). Investigating the effect of entrepreneurial competencies on business performance among early stage entrepreneurs Global Entrepreneurship Monitor (GEM 2010 survey data). *Journal of Global Entrepreneurship Research*. https://doi.org/10.1186/s40497-015-0037-4
9. Bastidas, J. A. (2012). No Title*עלון הנוטע*. תמונת מצב: הקיווי ענף, *66*, 37–39.
10. Bird, B. (1995). '*Towards a Theory of Entrepreneurial Competency*', in Katz.
11. Boyatzis, R.E. (1982). The competent manager: A model for effective performance. New York: Wiley.
12. Brooks, L. L. Z., & Johnston, J. (2012). *Electronic copy available at : https://ssrn.com/abstract=3182015 Electronic copy available*. 1–55.
13. Business, S., & Commons, O. (2009). *Entrepreneurial Competencies as an Entrepreneurial Distinctive : An Examination of the Competency Approach in Defining Entrepreneurs*.
14. Business, S., & Commons, O. (2009). Entrepreneurial Competencies as an Entrepreneurial Distinctive : An Examination of the Competency Approach in Defining Entrepreneurs.
15. Careerstop (2010) , Building Blocks for Competency Models Tiers 6-9 Occupation-Specific and Management Competencies,
16. Carton, R. (2005). Measuring organizational performance: an exploratory study. *Academy of Entrepreneurship*, 1–333.
    Comparison Approaches. Academy of Management Review,11,801-814.

17. Covin, J.G. &Slevin, D.P. 1991. A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1): 7–25.

18. Dinesh, S. (2018). Techology Adoption Among MSEs in Tirunelveli District. *International Journal of Pure and Applied Mathematics*, *119*(7), 2703–2716.
19. Dr. H. Ramananda Singh, D. H. R. S., & Rahman, H. (2012). Traits of Successful Entrepreneurs. International Journal of Scientific Research, 2(11), 292–294. https://doi.org/10.15373/22778179/nov2013/93
20. Dragnić, D. (2014). Impact of Internal and External Factors on the Performance of Fast-Growing Small and Medium Businesses. *Management – Journal of Contemporary Management Issues*, 119–160.

21. Dvir, D., Sadeh, A., Pines, A. M., & Shenhar, A. J. (2009). Key entrepreneurial traits and their relationship to venture uncertainty and venture success. *PICMET: Portland International Center for Management of Engineering and Technology, Proceedings, March 2016*, 1812–1818. https://doi.org/10.1109/PICMET.2009.5261951
22. Editorialexpress.com (2017), Firm performance: Do CEO characteristics matter? , 1–27.
23. Eydi, H. (2015). Organizational Effectiveness Models: Review and Apply in Non-Profit Sporting Organizations. *American Journal of Economics Finance and Management*, *1*(5), 460–467. Retrieved from http://www.aiscience.org/journal/ajefm

24. Fowosire, R. A., Idris, O. Y., & Elijah, O. (2017). Technopreneurship: A View of Technology, Innovations and Entrepreneurship. *Global Journal of Researches in Engineering*, *17*(7), 41–46. https://globaljournals.org/GJRE_Volume17/5-Technopreneurship-A-View-of-Technology.pdf
25. Fowosire, R. A., Idris, O. Y., & Elijah, O. (2017). Technopreneurship: A View of Technology, Innovations and Entrepreneurship. Global Journal of Researches in Engineering, 17(7), 41–46. https://globaljournals.org/GJRE_Volume17/5-Technopreneurship-A-View-of-Technology.pdf
26. Fraser, C., & Zarkada-Fraser, A. (2000). Measuring the Performance of Retail Managers in Australia. *International Journal of Retail & Distribution Management*, 28(6)
27. Fraser, C., & Zarkada-Fraser, A. (2003). Investigating the effectiveness of managers through an analysis of stakeholder perceptions. *Journal of Management Development*, *22*(9–10), 762–783. https://doi.org/10.1108/02621710310495766
28. Freiling, J., & Wessels, J. H. (2013). Entrepreneurial failure in the spotlight of the competence-based theory of the firm. *Research Gate*, *2*(June), 2–28.
29. Gartner, W.B. (1985), "A conceptual framework for describing the phenomenon of new venture creation", *Academy of Management Review*, Vol. 10 No. 4, pp. 696-706.
30. Griffin, Ricky W. (1987). Management. 2nd edn. Boston: Houghton Mifflin.
31. Haddadi, F., & Yaghoobi, T. (2014). Key indicators for organizational performance measurement. *Management Science Letters*, *4*(9), 2021–2030. https://doi.org/10.5267/j.msl.2014.8.019
32. Hambrick DC, Quigley TJ. (2014). Toward more accurate contextualization of the CEO effect on firm performance. Strategic Management Journal, 35, 473–491.
33. Hambrick, D. C. and P. A. Mason (1984), "Upper Echelons: The Organization as A Reflection of Its Top Managers", Academy of Management Review, 9(2), 193-206.

34. Hassan, H., & Ogundipe, A. A. (2017). ICT adoption by micro and small scale enterprises in Nigeria: A case study of the Federal Capital Territory, Abuja. *International Journal of Economic Research*, *14*(18), 117–137. https://doi.org/10.2139/ssrn.2951901
35. Hayton, J. (2015). Leadership and Management Skills in SMEs : Measuring Associations with Management Practices and Performance Non-technical report. *Department for Business Innovation & Skills*, (224), 40. Retrieved from https://www.gov.uk/government/publications/leadership-and-management-skills-in-small-and-medium-sized-businesses
36. Hedge, M. V., & Sabarirajan, K. K. (2018). *Swot Analysis to Reform MSEs*. *4*(1), 173–176.
37. Ho, L. A. (2008). What affects organizational performance? the linking of learning and knowledge management. *Industrial Management and Data Systems*, *108*(9), 1234–1254. https://doi.org/10.1108/02635570810914919
38. Ireland, R., Cantens, T., & Yasui, T. (2012). Organizational Performance Measurement. *The Development Compendium*, (13), 1–28. https://doi.org/10.1002/9781118436707.hmse030
39. Jimmy.S.Madata (2011), The role of entrepreneurial competencies on the success of the SME'S in Tanzania: Thecase studyof Ilalal And Temeke Municipals
40. Kabir, M., Ibrahim, H. I., Anuar, K., & Shah, M. (2017). Entrepreneurial competency as determinant for success of female entrepreneurs in Nigeria, 3(32), 143–152.
41. Kakde, B. B., & Chaudhari, T. (2018). *Problems and Prospects of Medium , Small and Micro industries in Bhandara District*. *6*(1), 907–917.
42. Kiggundu, M.N. (2002). Entrepreneurs and entrepreneurship in Africa: What is known and what needs to be done. *Journal of Developmental Entrepreneurship*, 7(3), 239-258.
43. Kochadai, M. (2012). The Concept of Entrepreneurial Competency, Competency Model and Review of Earlier Studies. *Entrepreneurial Competency: A Study with Reference to Socially and Economically Backward Communities in Chennai City*, 23–58. Retrieved from http://hdl.handle.net/10603/5303
44. Kotas, T., Analysis, E., Buildings, S., Society, A., Engineers, A., Analysis, E., & Buildings, S. (2001). Chapter 4 随机变量的数字特征 Chapter 4 随机变量的数字特征. 3(Chapter 2), 73–102. https://doi.org/10.1016/B978-0-08-044529-8.50007-0
45. Kraus, A. J., & Ferrell, J. Z. (2016). SIOP White Paper Series The Effect of Top Management Team Performance and Cohesion on Organizational Outcomes.
46. Kumar, B. (2017). Improved General Class of Ratio Type Estimators. *International Journal Of Mathematics And Computer Research*, *5*(08). https://doi.org/10.18535/ijsrm/v5i8.01
47. Kumar, T., & Kumar, S. (2013). An empirical study on technology adoption by Indian banks. *Global Journal of Management and Business Studies*, *3*(10), 1169–1172.
48. Kumari Neeraj, Devi Singh (June 2018), Prabandhan : Indian Journal of Management, volume 11- Impact of organizational culture on employee performance
49. Kuratko, D., Hornsby, J., & Biship, J. (2005). Managers´corporate entrepreneurial actions and job satisfaction. *International Entrepreneurship and Management Journal*, 1(3), 275–291. https://doi.org/10.1007/s11365-005-2589-1

50. LI, Xiang. Entrepreneurial Competencies as an Entrepreneurial Distinctive: An Examination of the Competency Approach in Defining Entrepreneurs. (2009). Dissertations and Theses Collection (Open Access)
51. Lumpkin, G.T. & Dess, G.G. 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21: 135–172.
52. Mahadalle, A., Mahallesi, B., & Mahallesi, B. (2017). Entrepreneurial characteristics and competencies as determinants of corporate performance :A study on small enterprises in Mogadishu , Somalia, 5(5), 243–254.
53. Mahesh, J. (2015). "Indian" Management Practices in the I.T. Sector- An Empirical Investigation, 1–227.
54. Makhura, S. M. (2011). an Analysis of the Entrepreneurial Competencies of the Owners / Managers of Emerging Small Contractor Companies in the Construction Ndustry, 85. Retrieved from http://wiredspace.wits.ac.za/bitstream/handle/10539/11634/Final research report 23 October.pdf?sequence=2
55. Mallya, L. S. (2011). Successful entrepreneurs of Indian origin: A case study Submitted by of, (August), 1–242.
56. Man, T. W. Y. (2001). *Entrepreneurial Competencies and the Performance of Small and Medium Enterprises in the Hong Kong Services Sector* (Doctor of Philosophy), The Hong Kong Polytechnic University, Hong Kong.
57. Man, TWY, Lau, T, & Chan, KF (2002). The competitiveness of small and medium enterprises: a conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing*, 17(2), 123–142
58. Manocha, S. (2012). Innovation and Entrepreneurship in Today'S Scenario. *IRJC International Journal of Marketing, Financial Services & Management Research*, *1*(8), 196–205. www.indianresearchjournals.com
59. Manshani, S., & Dubey, A. (2017). Startup women in startup India : A study of women entrepreneurs In India, *6*(4), 91–100.
60. Martin-Rojas, R., Garcia-Morales, V. J., & Gonzalez-Alvarez, N. (2019). Technological antecedents of entrepreneurship and its consequences for organizational performance. *Technological Forecasting and Social Change*, *147*(September), 22–35. https://doi.org/10.1016/j.techfore.2019.06.018
61. Mazzarol, T., Volery, T., Doss, N., & Thein, V. (1999). "Factors influencing small business start-ups. A comparison with previous research",. *International Journal of Entrepreneurial Behaviour and Research*, 5(2), 48–63.
62. Ministry of Micro Small and Medium Enterprises. (2016). District industrial profile, 1–22.
63. Misra Sunil, BL Srivastava (2018). Management and Labour Studies – Team building competencies, personal effectiveness and job satisfaction: The mediating effect of transformational leadership and technology, Volume 43, Number 1 & 2

64. Mohammed, K., Ibrahim, H. I., & Shah, K. A. M. (2017). Empirical Evidence of Entrepreneurial Competencies and Firm Performance: a Study of Women Entrepreneurs of Nigeria. *International Journal of Entrepreneurial Knowledge*, *5*(1). https://doi.org/10.37335/ijek.v5i1.53
65. Mohanty, E., & Mishra, A. J. (2020). Understanding the gendered nature of developing country MSEs' access, adoption and use of information and communication technologies for development (ICT4D). *International Journal of Gender and Entrepreneurship*, *12*(3), 273–295. https://doi.org/10.1108/IJGE-07-2019-0117
66. Mokhtar, A. (2017). *A study of competencies that influence entrepreneur performance in retail business ventures in Malaysia*.
67. Morris, M.H. & Kuratko, D.F. 2002. *Corporate entrepreneurship*. Mason, OH: South-Western CollegePublishers
68. NASSCOM. (2017). INDIAN START-UP ECOSYSTEM- Traversing the maturity cycle, 1–60. https://doi.org/10.15713/ins.mmj.3
69. Omotayo, F. O. (2015). Knowledge Management as an important tool in organisational management : A review of literature. *Library Philosophy and Practice (e-Journal).*, *1238*, 1–23. Retrieved from http://digitalcommons.unl.edu/libphilprac/1238
70. *On A Study On Digital Marketing adoption among MSEs In Western Uttar Pradesh Prof . SHALINI NIGAM*. (n.d.). *282005*, 0–28.*Department of Industries & Commerce , Haryana*. (2019). *2019*.
71. Osoro, W. N. (2012). Entrepreneurial Orientation Effects on Business Performance of Small and Medium Enterprises in Information Technology Sector in Nairobi. *East African Journal of Modern Entrepreneurship*, *7*(4), 166–187.
72. Pendse, P., Welingkar, P. L. N., & Minakshi Agrawal, P. (2015). Information technology as an Business Enabler in MSEs in India. *APOTHEOSIS : Tirpude's National Journal of Business Research*, *April*. https://www.researchgate.net/publication/275100903
73. Pradhan, P., Nigam, D., & Tiwari, C. K. (2018). Digital marketing and SMEs: an identification of research gap via archives of past research. *International Journal of Applied Engineering Research*, *13*(8), 6089–6097.
74. Presutti, M., & Odorici, V. (2019). Linking entrepreneurial and market orientation to the SME's performance growth: the moderating role of entrepreneurial experience and networks. *International Entrepreneurship and Management Journal*, *15*(3), 697–720. https://doi.org/10.1007/s11365-018-0533-4
75. Puri, B., & Clark, S. E. (2012). How to Transform Consumer Opinion when Disaster Strikes / The 2003 Cadbury India Worm Infestation. Retrieved from http://fletcher.tufts.edu/~/media/Fletcher/Microsites/CEME/pubs/reflections/Cadbury Case Final 2012.pdf
76. Rahman, N. A., Yaacob, Z., & Radzi, R. M. (2016). An Overview of Technological Innovation on SME Survival: A Conceptual Paper. *Procedia - Social and Behavioral Sciences*, *224*(August 2015), 508–515. https://doi.org/10.1016/j.sbspro.2016.05.427
77. Raiien, A. G. (2014). Leadership and managerial competences in a contemporary organization from the

standpoint of business executives. *Economics and Sociology*, *7*(3), 179–193. https://doi.org/10.14254/2071-789X.2014/7-3/14

78. Ravilochan, R. (2015). *Internet Applications in Micro and Small Enterprises: Evidence of Significance of the Emergents*. 68–75.
79. Rokhim, R., Wulandari, P., & Mayasari, I. (2018). Small medium enterprises technology acceptance model: A conceptual review. *International Journal of Business and Society*, *19*, 689–699.
80. Roy, S. (2013). Small and Medium Enterprises in India. *Small and Medium Enterprises in India*, *2*(12), 293–297. https://doi.org/10.4324/9780203593035
81. Sadegh Baradaran, M., Yadollahi Farsi, J., Reza Hejazi, S., & Akbari, M. (2019). A Competency-based Typology of Technology Entrepreneurs: A Systematic Review of the Empirical Studies. *Iranian Journal of Management Studies*, *12*(2), 2345–3745. https://doi.org/10.22059/IJMS
82. Sarwoko, E., & Nurfarida, I. N. (2018). *Entrepreneurial Orientation and Entrepreneurial Competency of Small and Medium Enterprises*. *December*, 527–530. https://doi.org/10.5220/0007424005270530
83. Sinarwati, N. K., & Setiawina, N. D. (2020). *MSEs PERFORMANCE INCREASING BASED ON SWOT ANALYSIS*. *June*.
84. Singh, S., & Gupta, V. (2016). Organizational performance research in India: A review and futureresearch agenda. In G. Misra (Ed.) *The Sixth Indian Council for Social Science Research (ICSSR) Survey of Psychology in India*. New Delhi: Oxford Publishing.
85. Smith, W., & Chimucheka, T. (2014). Entrepreneurship, Economic Growth and Entrepreneurship Theories. *Mediterranean Journal of Social Sciences*, (July). https://doi.org/10.5901/mjss.2014.v5n14p160
86. Specht, P.H. (1993), "Munificence and carrying capacity of the environment and organization formation", *Entrepreneurship Theory and Practice*, Vol. 17 No. 2, pp. 77-86.
87. Subrahmanya, M. H. B., Mathirajan, M., & Krishnaswamy, K. N. (2010). *Importance of Technological Innovation for SME Growth: Evidence from India*. *January*, 1–23.
88. Tehseen, S., & Ramayah, T. (2015). Entrepreneurial competencies and smes business success: The contingent role of external integration. *Mediterranean Journal of Social Sciences*, *6*(1), 50–61. https://doi.org/10.5901/mjss.2015.v6n1p50
89. Tran, Q., & Tian, Y. (2013). Organizational Structure: Influencing Factors and Impact on a Firm. *American Journal of Industrial and Business Management*, 03(02), 229–236. https://doi.org/10.4236/ajibm.2013.32028
90. Tripathi, Kamalendra & Jha, Kumar. (2018). An empirical study on factors leading to the success of construction organizations in India. International Journal of Construction Management. 1-18. 10.1080/15623599.2017.1423162.
91. Tsai, Y. (2011). Relationship between organizational culture, leadership behavior and job satisfaction. *BMC Health Services Research*, *11*(1), 98. https://doi.org/10.1186/1472-6963-11-98
92. Van Aardt, I., Van Aardt, C., Bezuidenhout, S and Mumba, M. 2008. Entrepreneurship and New Venture Management. 3rd Edition. Oxford University Press: Southern Africa.
93. Venkatraman,N.,&Ramanujam,V.(1986). Measurement of Business Performance in Strategy Research:

94. WHO. (2008). Operations Manual for Delivery of HIV Prevention, Care and Treatment at Primary Health Centres in High-Prevalence, Resource-Constrained Settings. *Leading Organizations: Perspectives for a New Era*, 264–281. https://doi.org/10.5014/ajot.41.5.281

95. Yadav, J., & Gulati, N. (2019). *SWOT Analysis of Micro Entrepreneurship and Start-ups in Haryana*. *8*(6), 399–405. https://doi.org/10.11648/j.ijber.20190806.20

96. Yadav, J., & Gulati, N. (2019). SWOT Analysis of Micro Entrepreneurship and Start-ups in Haryana. 8(6), 399–405. https://doi.org/10.11648/j.ijber.20190806.20

97. Yun, M. (n.d.). *Technological Capability of MSEs and Implications for Innovation Policy : A Case Study of Vietnam.*

98. Zarefard, M., & Cho, S. E. (2018). Entrepreneurs ' Managerial Competencies And Innovative Start-up Intentions In University Students :, 22(2).

99. Zhang, X. (2012). The Impact of Entrepreneurial Learning on Entrepreneurial Performance : The Mediating Role, (1993), 229–23.

100. Zou,S.,&Stan,S.(1998). The Determinants of Export Performance: A Review of the Empirical Literature between 1987 and 1997, International Marketing Review, 15 (5), 333-356.

MANAV RACHNA

Swami Vivekananda Library and Resource Centre
Manav Rachna University

SIMILARITY VERIFICATION CERTIFICATE

Title: Entrepreneurial Competencies Impacting Select Micro & Small Enterprise (MSE) Performance in Faridabad - Examining the moderating effect of Information Technology.

Researcher: SRILEKHA S Registration Number: 2K17-PFM-008

Supervisor: Dr. POOJA KAPOOR Department: Department of Management and Commerce.

This is to certify that the above mentioned Short Synopsis / ~~Thesis~~ was scanned for similarity index through Turnitin Software on 25-Nov 2020 with submission ID 1456842484 and the similarity index was found to be 5%. The complete report running into 35 Pages, 7583 Word count with File Size 5172 KB is being forwarded to the Research Supervisor/DRC/DRB for review.

Swami Vivekananda Library and Resource Centre, Faridabad * Manav Rachna University
22/1/2021

Date: 22-Jan-2021

The complete report of the above Short Synopsis/~~Thesis~~ has been reviewed and the similarity index is below the accepted norms as per the University Grants Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations 2018. The Short Synopsis/~~Thesis~~ may be considered for further processing.

Research Scholar

Srilekha.
22/1/2021

Research Supervisor
Pooja Kapoor
22/01/2021

Scanned by Easy Scanner

Srilekh_S_Short_Synopsis_25.11.2020

ORIGINALITY REPORT

Excluding matches less than 14 words

5%	4%	2%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

Srilekh 22/01/2021

Pooja Kapoor 22/01/2021

1	mafiadoc.com Internet Source	1%
2	www.researchsquare.com Internet Source	1%
3	www.readbag.com Internet Source	<1%
4	Ismael Abu Jarad, Nor'Aini Yusof, Mohd Wira Mohd Shafiei. "The organizational performance of housing developers in Peninsular Malaysia", International Journal of Housing Markets and Analysis, 2010 Publication	<1%
5	Submitted to Universiti Utara Malaysia Student Paper	<1%
6	www.scribd.com Internet Source	<1%
7	Submitted to London School of Commerce Student Paper	<1%
	Submitted to CVC Nigeria Consortium	

Scanned by Easy Scanner

8	Student Paper	<1%
9	Submitted to HELP UNIVERSITY Student Paper	<1%
10	Submitted to Higher Education Commission Pakistan Student Paper	<1%
11	web.bi.no Internet Source	<1%

Exclude quotes On

Exclude bibliography On

Exclude matches < 14 words

Scanned by Easy Scanner